KENTUCKY
RECOMMENDED
SIX-YEAR HIGHWAY PLAN
FY 2005 -2010

APPENDIX A
"GARVEE" POSSIBILITIES

"Providing Kentuckians with a safe and reliable Highway System..."

APPENDIX A

"GARVEE" Possibilities

During the 2004 Legislative session, the Kentucky Transportation Cabinet (KYTC) will be seeking enabling legislation and approval to pursue a specific group of interstate widening projects through an innovative financing technique known as "Grant Anticipation Revenue Vehicles (GARVEEs)." This financing technique is permitted by federal law and involves the commitment of future federal-aid appropriations as leveraging for current year highway improvements. The primary benefit of such an arrangement is that major highway improvements can be purchased at today's prices and paid for with interest over a multi-year timeframe. The application of the GARVEE principle is very similar to home mortgage financing, but is used to purchase major highway investments when "pay-as-you-go" is not the desirable course.

If the use of GARVEEs is permitted by the 2004 General Assembly, KYTC seeks to begin the following major interstate widening projects during the upcoming biennium:

- **Interstate 64:** Widen to six lanes from the Snyder Freeway in Jefferson County to Shelbyville (total cost $110 million)

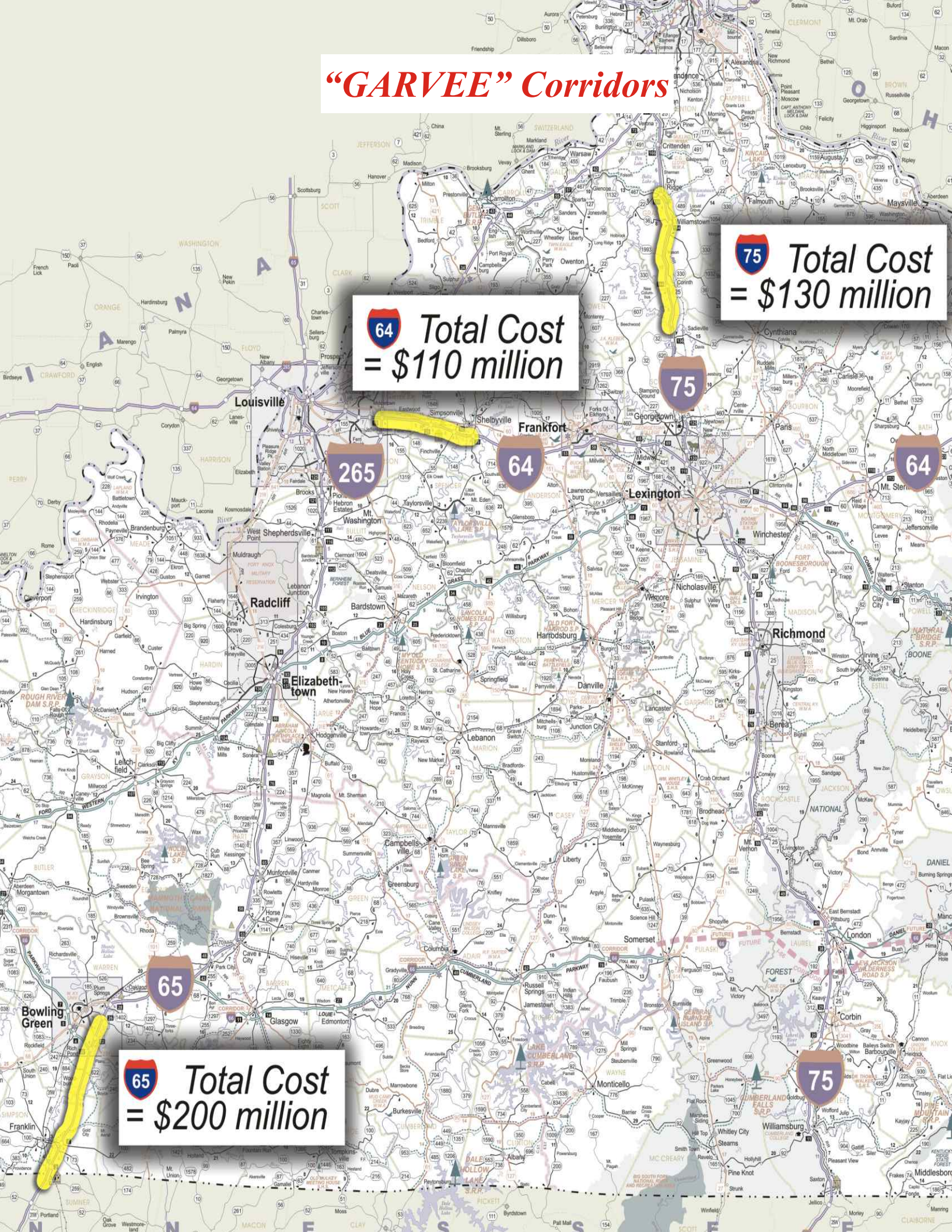
- **Interstate 65:** Widen to six lanes from the Tennessee state line to Bowling Green (total cost $200 million)

- **Interstate 75:** Widen to six lanes from the end of the current six-lane section in northern Scott County to the current six-lane section south of KY 22 in Grant County (total cost $130 million)

Each of these interstate widening projects constitutes a necessary investment in Kentucky's future. The need to accommodate both people movement and freight movement in each of these highway corridors is critical to Kentucky's economy in the years ahead. Each of these routes (see the attached map) currently carries a disproportionately high percentage of truck traffic, and forecasts call for the numbers of trucks in the traffic stream to continue to increase as NAFTA continues to yield higher and higher volumes of freight from Latin America to Canada.

The following excerpt from FHWA's "Innovative Finance Primer" outlines the GARVEE concept. There are many details that would have to be worked through in the months ahead, but KYTC envisions a "direct GARVEE" package, financed over a 12-year period, as the methodology for building the three interstate widening projects listed above. Without GARVEEs, these three projects will continue to be piece-mealed over time, and likely not completed until the year 2015 to 2020. The innovative idea of GARVEEs, along with determined state leadership, will yield the kind of realistic solution necessary to reverse the "always behind" mentality of the past and help restore hope to Kentucky's transportation program.

Attachment


"GARVEE" Corridors
75
Total Cost
= $130 million
64
Total Cost
= $110 million
65
Total Cost
= $200 million
Louisville
Frankfort
Lexington
Richmond
Elizabeth-
town
Radcliff
Bowling
Green
265
64
75
65
75

CHAPTER 3
DEBT FINANCING

Source: Innovative Finance Primer – FHWA

Some transportation projects or programs of projects are so large that their costs exceed available current grant funding and tax receipts, or would consume so much of these current funding sources as to delay many other planned projects. For this reason, when states and local agencies consider ways to pay for these large projects, they often look to financing the projects through borrowing. The most common method of borrowing is to issue municipal bonds. The bond issuance yields an immediate influx of cash in the form of bond proceeds. The state or local agency then retires its obligation by making principal and interest payments to the investors over time.

MUNICIPAL BONDS

Municipal bonds are interest-bearing obligations issued by state or local government to finance public facilities' capital or operating costs. The principal characteristic that has differentiated municipal bonds from other capital market securities is that the interest they pay to investors is exempt from Federal income tax.

Municipal bonds take a number of forms and merit a more complete discussion than possible here. For a thorough discussion of the municipal bond market and its interaction with Federal transportation funding, see, for example, *Bond Financing and Transportation Infrastructure: Exploring Concepts and Roles*, published by the Federal Highway Administration (Publication No. FHWA-PL-94-014).

Although bond financing imposes interest and other debt-related costs, bringing a project to construction more quickly than otherwise possible can sometimes offset these costs. Delaying projects can impose costs that derive from a variety of sources: inflation, lost driver time, freight delays, wasted fuel, and forgone or deferred economic development. Any analysis of the financial costs and benefits of debt financing weighs the costs of borrowing against the economic, safety, and mobility benefits of completing the project sooner than would be possible with pay-as-you-go funding. In recent years, Federal policy makers have examined strategies under which Federal-aid funds can better support states that elect to accelerate projects through borrowing.

Repayment of bond financing necessitates a stream of future revenues, which can come from a variety of sources. A few examples of traditional options have included general state and local taxes, fuel taxes or vehicle-related fees, and toll receipts. In recent years, Federal law has expanded states' ability to tap Federal-aid highway funds as another potential repayment source: apportioned Federal-aid highway funds. In this variation of a grant anticipation note, states can pledge a share of future Federal highway funding toward payment of debt service on a long-term bond issue. Bonds repaid with future Federal funds are commonly referred to as GARVEEs, or Grant Anticipation Revenue Vehicles. The remainder of this chapter discusses pledges of future Federal-aid highway funds under the GARVEE financing mechanism.

3.1 GRANT ANTICIPATION REVENUE VEHICLES (GARVEES)

GARVEEs permit states to pay debt service and other bond-related expenses with future Federal-aid highway apportionments.

WHAT'S NEW

While some debt service payments have been eligible for reimbursement from Federal-aid highway funds since the beginning of the modern Federal-Aid Highway Program in 1956, this opportunity was of limited practical use. For example, prior to 1995, states could use their apportioned Federal-aid highway funds to repay only the principal component of debt service on certain categories of projects, and interest costs were eligible for reimbursement only for some Interstate projects.

The NHS Act, which amended Section 122 of Title 23 to expand FHWA's bond reimbursement provisions, effected two significant changes:

- The NHS Act expanded the types of debt-related costs eligible for Federal-aid reimbursement to include interest expense for all projects, debt issuance costs, and the cost of purchasing commercial bond insurance.
- The NHS Act eliminated provisions that restricted the amount and timing of advance construction authorizations. The limitation was replaced with a requirement that advance construction projects be on the approved STIP, enabling FHWA to approve an advance construction project at any time.

The change to the advance construction provisions is explained in greater detail in the preceding chapter concerning the management of Federal funds.

The ability to convert advance construction in a future authorization period is critical to the GARVEE process. Under the former rules, it would have been necessary to obligate the Federal share of debt service payments within the bounds of available obligation authority. Under the new rules, it is possible to obligate Federal funds for debt service expenses over a longer period.

Candidate Projects and Key Requirements

Candidates for GARVEE financing are typically larger projects (or programs of projects) that have the following characteristics:

- They are large enough to merit borrowing rather than pay-as-you-go grant funding, with the costs of delay outweighing the costs of financing;
- They do not have access to a revenue stream (such as local taxes or tolls) and other forms of repayment (such as state appropriations) are not feasible; and
- The sponsors (generally state DOTs) are willing to reserve a portion of future year Federal-aid highway funds to satisfy debt service requirements.

GARVEEs Steps in the Process

1. State seeks approval for advance construction of GARVEE project(s).
2. State makes election to receive reimbursements for construction or debt service.
3. FHWA approves project as debt-financed project and executes project agreement(s).
4. State issues bonds and uses proceeds for construction.
5. State requests partial conversion of AC project(s) for semi-annual/annual debt service payments.
6. FHWA obligates Federal funds for requested debt service payment.
7. State claims reimbursement for Federal share of bond debt service and funds are paid to state account.
8. State uses Federal-aid reimbursement for debt service on bonds.

In addition, candidate projects must be eligible for Federal-aid highway funding under one or more program funding categories for which advance construction is available. (Section 115 of Title 23 specifies these categories, and they are also listed in Section 2.1 of this primer.) The projects must also appear on the STIP.

In general, projects financed with the proceeds of a GARVEE debt instrument are administered in the same manner and are subject to the same requirements as other Title 23 projects. As discussed below, the primary difference relates to the reimbursement process.

Costs Eligible for Reimbursement

One of the important changes effected by the NHS Act was to broaden the types of debt-related costs eligible for reimbursement. Costs eligible for reimbursement now include the following:

- Interest payments and retirement of principal (including any capitalized interest) under an eligible debt financing instrument;
- Issuance costs (including but not limited to underwriters' discounts, rating agency fees, fees paid to financial advisors and bond counsel, and printing costs) and credit enhancement fees (such as bond insurance premiums); and
- Any other related incidental costs as determined by the Secretary (including ongoing trustee fee and audit costs).

Under certain conditions, capitalization from bond proceeds of a required reserve account or contingency fund may also be eligible for Federal-aid reimbursement.

Matching Requirements

Reimbursements on GARVEE-financed projects are subject to the same matching share requirements that attach to any other project funded from the same program category.

One of the more fundamental decisions for states structuring a GARVEE transaction is whether to match the Federal reimbursement of debt service up front (by, for example, reducing the borrowing requirements through a direct pay-as-you-go contribution toward project costs) or on a payment-by-payment basis. In the former case, it is acceptable for the state match to be provided as an in-kind match (under the flexible match provisions) or with toll credits. In the latter case, the state would provide its matching contribution on a nominal, current-year basis, with each debt service payment matched at the proper pro rata share.

As noted in a previous chapter, states cannot use tapered match on GARVEE-financed projects.

Eligible Issuers and Debt Instruments

By law, GARVEEs must be issued by a state, a political subdivision of a state, or a public authority. These categories include State Infrastructure Banks (SIBs) and 63-20 corporations[1] as eligible issuers. In cases where a SIB issues

[1] *These non-profit corporations are known as 63-20 corporations, in reference to a 1963 Internal Revenue Service Ruling that created the opportunity for certain non-profit entities to issue bonds for which investors' interest payments are exempt from Federal income tax, as with municipal bonds.*

GARVEE bonds, reimbursement of debt service expense incurred by the SIB would not be viewed as SIB capitalization grants. Eligible financing instruments include bonds, notes, certificates, mortgages, leases, or other debt financing techniques.

Terms of the Transaction

The issuer of a GARVEE bond has significant flexibility in structuring the terms of the transaction. Coverage ratios, interest rates, the term of the obligation, the level of debt service reserves, and the use of bond insurance are all matters determined by the issuer and the credit markets. An additional consideration for any state contemplating a GARVEE issuance is the extent to which the state is willing to place claims on future Federal funding, as a GARVEE today means debt service tomorrow – and commitment of Federal monies that would otherwise be available to fund pay-as-you-go projects. Some states may need enabling legislation to issue GARVEEs; in some states, legislation includes clauses that place limits on the volume of GARVEE debt that can be issued.

Another key decision left to the state's discretion is how to structure the revenue pledge, leading to two major types of GARVEEs: non-recourse GARVEEs and back-stopped GARVEEs, each of which is described below.

- Non-Recourse GARVEEs – States may elect to pledge their obligations of future Federal-aid funds as the only security backing the Federal share of the obligation to investors. Because of the additional risk associated with any non-recourse financing, and in the absence of bond insurance, these issues may carry higher interest rates and therefore be a bit more expensive than recourse financings.

  The market may also perceive risk when the pledge of future Federal-aid funds spans authorization periods. This is because there is no guarantee that the Federal highway program will be reauthorized at the end of the authorization period (such as TEA-21 which expires in 2003). Moreover, Section 122 makes it clear that a debt financing instrument's eligibility for reimbursement with future Federal-aid highway funding does not constitute a commitment, guarantee, or other obligation by the United States, nor does it create any right of a third party (such as an investor) against the Federal government for payment.

- Back-stopped GARVEEs – States may elect to pledge other sources of revenue as a back-stop for the future Federal-aid funds. In these cases, states have pledged a secondary source of revenues, such as state fuel tax revenues or local property taxes, to payment of debt service in the event that future Federal-aid highway funds are not available. This will generally result in lower interest costs on the bonds. The offsetting disadvantage of this structure, of course, is that it requires another source of revenue to be available for the back-stop pledge.

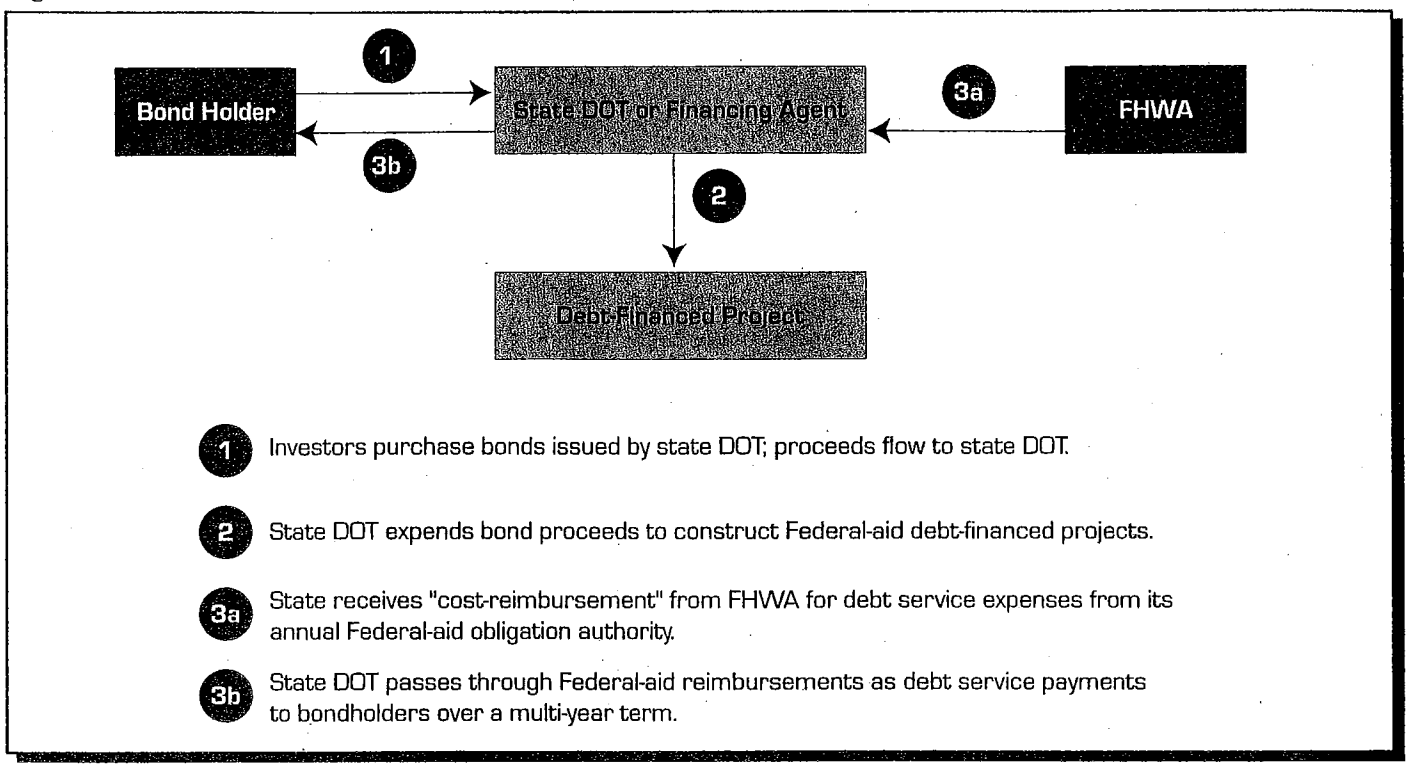
GARVEEs in New Mexico and Arizona

- *New Mexico* sold its first GARVEE bond in September 1998, to finance 118 miles of improvements on Corridor 44, a primary trade and tourist route for northwestern New Mexico. The New Mexico Financing Authority was the conduit issuer for the New Mexico State Highway and Transportation Department. This was the first state to issue bonds backed solely by a pledge of future Federal-aid funds, paving the way for other states to issue debt repaid with Federal funds without a backstop of state revenues. The $100 million GARVEE issue also incorporated an innovation in the form of a "present-value" match that was approved under TE-045. A second issue for $18.5 million was sold in February 2001 to finance the U.S.70 Corridor reconstruction project. This issue is unique in that it is the first GARVEE issue to be repaid with Federal Forest Highway funding.
- The *Arizona* Department of Transportation is using GARVEEs, in combination with SIBs, to finance acceleration of the Maricopa Country freeway system. Plans call for issuing about $450 million of GARVEEs, designated as GANs in Arizona. The first issue of $39.4 million was advanced in June 2000 and the second issue, totaling $142.9 million, sold in May 2001. Arizona has structured its issues with a stand-alone pledge of only Federal funds, as New Mexico has done. Also the issues are characterized by relatively short maturities.

What is an Indirect GARVEE?

FHWA uses the term "GARVEE" to apply to projects authorized under 23 U.S.C. Section 122. However, some states have issued grant anticipation notes pledging, as a source of revenue, Federal highway funds that will be paid to the state as Federal-aid projects are constructed. These Federal-aid projects may not even relate to the purpose for which the grant anticipation notes are being issued. As soon as the Federal highway funds are received by the state for the cost of work completed, they become state funds and may be used for any purpose authorized by state law, including debt service payments. Some states have referred to these grant anticipation notes as indirect GARVEEs or Federal reimbursement anticipation notes.

Figure 3.1 - GARVEE Bonds



GARVEEs in Practice

When a project or a program of projects is selected for GARVEE financing, it must first be approved as a Federal-aid debt financed project(s). Discussions with bond counsel are always advisable during the process of identifying GARVEE candidate projects. FHWA approves only the project or program of projects to be debt financed, not the bond issue; the bond issue itself is under state authority.

FHWA approval must be received to designate the project(s) for advance construction under the appropriate funding categories, and the project(s) must appear on the STIP. At this time, FHWA also approves the project(s) for the GARVEE financing mechanism, and can provide advice on the finer points of the interaction between the GARVEE instrument and the Federal-Aid Highway Program. A method is then selected for matching the Federal contribution, either through an up-front non-Federal contribution or a payment-by-payment match. It is also possible for states to issue a separate series of bonds to satisfy the non-Federal matching requirement.

As illustrated in Figure 3.1, debt is issued by the state or its designated financing agent, and construction proceeds on the project(s) using proceeds of the GARVEE issue to fund eligible costs. Funds are obligated as debt service comes due, generally through the use of partial conversion of advance construction. PCAC is an especially appropriate technique, since debt service payments will spread out over a number of years and states will find it advantageous to consume only the necessary amount of obligation authority each year. Debt service payments can be sent to either a state-designated account or a trustee.

Grant Anticipation Revenue Vehicles (GARVEEs)

Grant anticipation revenue vehicles (GARVEEs) are another tool states can use to finance highway infrastructure projects. GARVEE bonds are any bond or note repayable with future federal-aid highway funds. The NHS Act and TEA-21 brought about changes that enabled states to use federal-aid highway apportionments to pay debt service and other bond-related expenses and strengthened the predictability of states' federal-aid allocation. While GARVEEs do not generate new revenue, the new eligibility of bond-related costs for federal-aid reimbursement provides states with one more option for repaying debt service. Candidate projects are typically large enough to merit borrowing rather than pay-as-you-go grant funding; do not have access to a revenue stream (such as local taxes or tolls) or other forms of repayment (state appropriations); and have support from the state's DOT to reserve a portion of future year federal-aid highway funds to fund debt service. In some cases, states may elect to pledge other sources of revenue, such as state fuel tax revenue, as a backstop in the event that future federal-aid highway funds are not available.

Table 3: State's use of GARVEE bonds

State	Date of issuance	Face amount of issue	Projects	Backstop financing
Alabama	Apr-02	$200 million	County Bridge Program	All federal construction reimbursements. Also insured.
Arizona	Jun-00 May-01	$39.4 million $142.9 million	Maricopa freeway projects	Certain sub-account transfers
Arkansas	Mar-00 Jul-01	$175 million $185 million	Interstate highways	Full faith and credit of state, plus state motor fuel taxes
Colorado	May 00 Apr-01 Jun-02	$537 million $506.4 million $208.3 million	Any project financed wholly or in part by Federal funds	Federal highway funds as allocated annually by CDOT; other state funds
New Mexico	Sep-98 Feb-01	$100.2 million $18.5 million	New Mexico SR 44	No backstop; bond insurance obtained
Ohio	May-98 Aug-99 Sep-01	$70 million $20 million $100 million	Spring-Sandusky project and Maumee River Bridge Improvements	Moral obligation pledge to use state gas tax funds and seek general fund appropriations in the event of federal shortfall
Total		**$2,301.7 million**		

Source: FHWA, June 2002

KENTUCKY
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SIX-YEAR HIGHWAY PLAN
FY 2005 -2010

APPENDIX B
"MEGA-PROJECT" STATUS

"Providing Kentuckians with a safe and reliable Highway System..."

APPENDIX B

Kentucky's "Mega-Projects"

As the 2004 edition of the Recommended FY 2005-2010 Six-Year Highway Plan was developed, strong consideration was given to the funding needs associated with four "Mega-Projects" located in Kentucky. As the attached map shows, these projects are (1) the Louisville Bridges project, (2) the Interstate 71/75 Brent Spence Bridge congestion relief project in northern Kentucky, (3) Proposed Interstate 66 in southeastern Kentucky, and (4) Proposed interstate 69 in far western Kentucky. Each of these projects would be an expensive, but welcome, addition to Kentucky's highway system.

The term "Mega-Project" is a reference to the fact that each project will cost near, or in excess of, $1 billion. As we contemplate the fiscal realities associated with such extreme costs, there is a key factor common to each "Mega-Project" that must be reconciled before tremendous amounts of Kentucky's regular federal-aid and state fund revenues can be applied to any of them. That key factor is the amount of special federal funding that can be earmarked for each project during the reauthorization of federal transportation programs over the months ahead. Given the extremely tight fiscal status of Kentucky's Road Fund, we cannot plan for huge investments in any of the "Mega-Projects" until the true extent of federal support for each project can be gauged.

Each of the four "Mega-Projects" is underway, with varying levels of progress achieved. The remainder of Appendix B provides a description, an approximate total cost, and a brief report on the progress to-date for each project. **With a combined price tag of almost $9 billion and the realization that this cost is equivalent to two Six-Year Highway Plans, it is obvious that regular state and federal-aid financing of these jobs will significantly affect Kentucky's ability to buy other needed highway improvements over the next 20 years.** Accordingly, we are being very prudent about making commitments until more of the funding factors are known.

The Louisville Bridges

The Louisville Bridges project is located in the Louisville metropolitan area and involves a two-part approach to resolving traffic congestion problems in the region. The existing highway network features a myriad of interstate highway facilities (Interstates 64, 65, and 71) that all meet in a tangled maze of ramps known locally as "Spaghetti Junction" in downtown Louisville. Immediately associated with Spaghetti Junction is the Interstate 65 Kennedy Bridge, which links downtown Louisville with Jeffersonville, Indiana. Since there are no true outer beltways linking the Kentucky and Indiana portions of the Greater Louisville Area, virtually all north-south and east-west traffic is forced through Spaghetti Junction. This creates traffic delays of major proportions during peak morning and afternoon rush hours.

While Spaghetti Junction and the Kennedy Bridge certainly need to be modernized, transportation professionals understand that a major culprit in downtown Louisville traffic congestion is the absence of a "relief valve." To truly accommodate future traffic in the Louisville area, it is essential to connect together the dangling ends of

Interstate 265 east of Louisville. This can be accomplished by building a new bridge over the Ohio River in the vicinity of Prospect, Kentucky, and Utica, Indiana. This new "East End Bridge" would provide an alternative route to Spaghetti Junction and would work in concert with the "Downtown Bridge" to move traffic efficiently through the region.

Much work has been done over the past few years to complete an Environmental Impact Statement for the Louisville Bridges project. Recognizing the dependence of each bridge on the other, a careful balance has been crafted to pursue both new bridges in a harmonious manner. Within the next 18 months, costs and project development schedules will begin to firm up, as will the extent of dedicated federal funding that federal reauthorization and appropriations processes will deliver. The costs for this project over the multi-year project life are expected to approach **$2.5 billion**.

The Interstate 71/75 Brent Spence Bridge

The Interstate 71/75 Brent Spence Bridge is the focal point for some of the heaviest traffic volumes in Kentucky as these two major north-south interstates cross the Ohio River between Covington, Kentucky and Cincinnati, Ohio. This bridge not only serves traffic between two major urban centers, but it also connects the downtown areas with one of the world's busiest airports, the Greater Cincinnati/Northern Kentucky Airport located in Boone County, Kentucky. In recent years, the existing double-deck bridge has been "re-striped" to carry additional lanes of traffic and, although the bridge is still structurally strong as indicated by its sufficiency rating of 64.0 out of a possible 100 points, it is functionally outdated.

Recognizing the old bridge's inability to meet today's traffic demands, and knowing that the situation will only worsen in the years ahead, metropolitan transportation planners are working with the Kentucky Transportation Cabinet (KYTC) and the Ohio Department of Transportation (ODOT) to craft a reasonable solution. A feasibility study is currently underway to narrow the corridor options for a new Ohio River bridge, from which further project development work can determine the most desirable approach to solving the traffic problem at this location. There are environmental issues, downtown redevelopment concerns, and physical alignment constraints that work together to make this a very challenging project. Accordingly, one of the most challenging considerations will be the project cost, which is estimated at **$750 million**, but could grow significantly depending upon the ultimate improvement option recommended.

Proposed Interstate 66

The Proposed Interstate 66 (Transamerica) corridor in southeastern Kentucky extends from Interstate 65 near Bowling Green along the Cumberland Parkway to west of Somerset, from which it departs and extends north and east around Somerset, then along KY 80 and south to Interstate 75 south of London. From Interstate 75, the corridor extends eastward along the Hal Rogers Parkway to Hazard before heading east to US 23 south of Pikeville. From US 23 south of Pikeville, Proposed Interstate 66 would extend across the rugged mountainous terrain of Pike County to existing US 52 (Proposed Interstate 74 Corridor) near Matewan, West Virginia. Along this course,

Proposed Interstate 66 would pass through some of the most severely economically distressed counties in Appalachia.

At the present time, there are three independent segments of Proposed Interstate 66 that are involved in some degree of highway project development. The first of these segments is the north bypass of Somerset, which will serve to provide a high-speed connection from the Cumberland Parkway to KY 80 east of Somerset. Preliminary engineering and environmental studies have been underway, with a corridor location decision expected by this summer. The north bypass of Somerset is expected to cost approximately **$250 million.**

The second active Proposed Interstate 66 project in southeastern Kentucky is the connector between KY 80 east of Somerset and Interstate 75 south of London. Preliminary engineering and environmental work are also underway for this section, with an approved corridor location expected by the summer of 2006. There are many environmental issues associated with this project including involvement with the Daniel Boone National Forest, a wild and scenic stretch of the Rockcastle River, and numerous cliffline, cave, and cultural/historic concerns. There has been, and will continue to be, considerable public involvement and coordination with resource agencies to minimize the environmental effects of this project. The total estimated cost of the Somerset to London section of Proposed Interstate 66 is **$1.5 billion.**

The third section of Proposed Interstate 66 that is being developed is the portion of the route between US 23 south of Pikeville and US 52 (Proposed Interstate 74) in West Virginia. An Environmental Impact Statement for this segment of Interstate 66 was completed in October 2003. While environmental issues have proven to be minimal in the Pike County area, the rugged terrain makes this one of the most expensive sections of Proposed Interstate 66 to build. It is expected that it will cost more than **$2 billion** to complete this connection between US 23 and US 52.

Proposed Interstate 69

Proposed Interstate 69 is being pursued in some manner by every state it traverses, from south Texas to the Michigan border with Canada. The impetus for Interstate 69 is Latin American trade, and the overland transportation need to link Latin America with Canada and the northeastern United States. The states involved in this project are Texas, Louisiana, Arkansas, Mississippi, Tennessee, Kentucky, Indiana, and Michigan. An Environmental Impact Statement has been prepared for the entire route, with the "purpose and need" of the project focused squarely on freight movement.

In Kentucky, Interstate 69 will follow the existing Purchase Parkway from the Tennessee State Line to Interstate 24, then Interstate 24 to the Western Kentucky Parkway, then the Western Kentucky Parkway to the Pennyrile Parkway, then the Pennyrile Parkway north to Henderson. At Henderson, a new route (including a new Ohio River bridge) will be required to connect to Interstate 64 in southern Indiana. Both Tennessee and Indiana are actively engaged in pursuing their own segments of Interstate 69, and each state has cooperated in studies to assess connections at the state lines.

For Interstate 69 to become fully functional in Kentucky, it is expected that the existing parkway system will have to be upgraded. The Purchase, Western Kentucky, and Pennyrile Parkways are all limited access, four-lane divided highways, but there are spot locations where access control would have to be tightened and shoulder widths, clear zones, and bridge dimensions addressed before interstate highway design standards are achieved in full. It is expected that such upgrades will cost **$700 million** or more to accomplish. At Henderson, the new route and its new Ohio River bridge will likely cost an additional **$800 million** to complete. At this time, KYTC is involved in a study of the parkway upgrade needs from Interstate 24 to Henderson, and is on the verge of wrapping up the preliminary engineering and environmental work for the new Ohio River crossing at Henderson. Continuing work on Interstate 69 in Kentucky will depend upon the financial support that can be garnered for the project through the federal reauthorization and appropriations processes.

Kentucky's "Mega-Projects"